

DRILL HOLES

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BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect and street lighting at the intersection of MD 198 (Sandy Spring Road) and McKnew Road in Montgomery County. The existing existing pedestrian signal heads shall be replaced with Countdown pedestrian signals. MD 198 (Sandy Spring Road) is assumed to run a east-west direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the MD 198 (Sandy Spring Road) approaches running concurrently. The Exclusive/Permissive left turn phase for the eastbound and westbound approaches of MD 198 (Sandy Spring Road) will continue to operate as normal. Countdown pedestrian phases with audible pushbutton actuation shall be provided for the east leg of this intersection. The McKnew Road approach shall continue to operate as normal.
- A existing eight-phase controller, shall be used to house the 2-wire Central Control Unit and all necessary equipment in a NEMA size "6" base-mounted cabinet at this intersection.
- Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming two weeks prior to beginning work.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the Montgomery County Signal Shop. Contact Mr. Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- APS will function as follows:
FOR MD 198 (SANDY SPRING ROAD)
a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Sandy Spring at McKnew" Crosswalk angles left.
b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contacts for Montgomery County are as follows:

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7318

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Kamal Hamud
Mont. County TMC Center
240-777-8761

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Keith Lord
Signal Shop (Mont Co.)
301-674-8965

Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

Mr. Sonny Bailey
Sign Shop
410-787-7670

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

ITEM NO.	DESCRIPTION	QUANTITY
9571	Sheet aluminum signs to consist of: (pole mount) Pedestrian education R10-3(1) (Note: Sign to read "PUSHBUTTON TO CROSS SANDY SPRING ROAD")	2 SF 2 EA

EQUIPMENT LIST

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2002	Test Pit Excavation	2 C.Y.
5001	Removal of existing permanent pavement line markings any width	320 L.F.
5005	12" white preformed thermoplastic pavement marking lines	200 L.F.
5006	24" white preformed thermoplastic pavement marking lines.	100 L.F.
6002	5" concrete sidewalk.	125 S.F.
8001	12" LED signal head section.	32 EA
8002	2 wire Central Control unit	1 EA
8007	Audible/tactile pedestrian pushbutton station & signs.	2 EA
8008	Breakaway pedestal pole (10')	2 EA
8010	LED 16" countdown pedestrian signal head.	2 EA
8013	Remove and dispose of equipment (per assignment)	1 EA
8018	Schedule 80 rigid PVC conduit up to 4" - trenched.	40 L.F.
8019	Detectable warning surface for curb ramps	50 S.F.
8023	Electrical cable - 2 conductor (No. 14 AWG).	370 L.F.
8025	Electrical cable - 5 conductor (No. 14 AWG).	375 L.F.
8033	No. 6 AWG stranded bare copper ground wire.	100 L.F.
Neg.	Relocate existing ground sign	1 EA
Neg.	Loop wire encased in flexible tubing (No. 14 AWG).	425 L.F.
Neg.	Saw cut for signal (loop detector).	115 L.F.
Neg.	1" detector sleeve galvanized or flexible liquid tight.	10 L.F.
Neg.	Electrical cable - 2 conductor (aluminum shielded)	80 L.F.

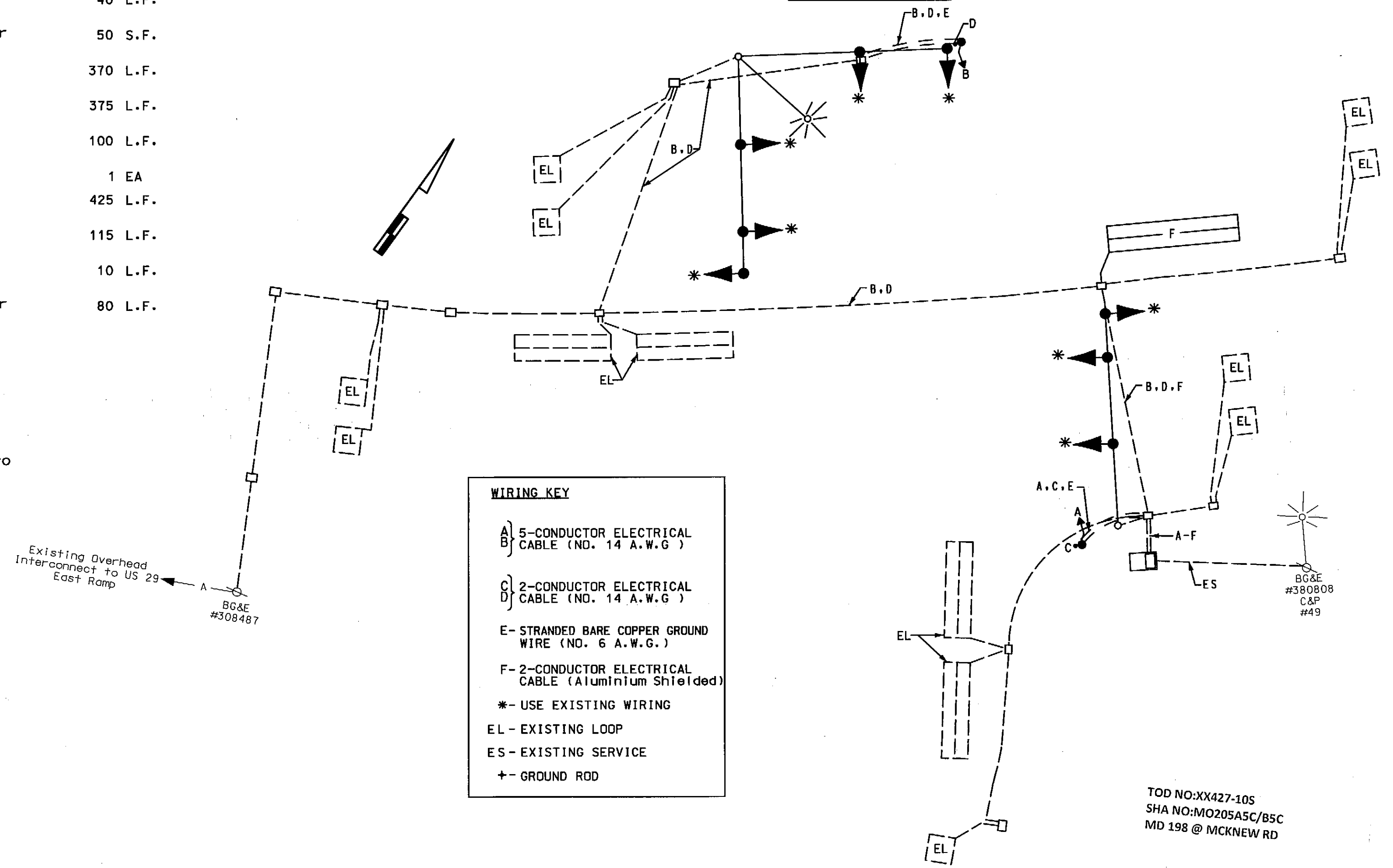
C. EQUIPMENT TO BE REMOVED

All removed signal materials are to become property of the contractor.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	
PHASE 1 & 5	←G→R	←G→R	R	←G→R	←G→R	R	R	R	DW	DW	↑
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6											
PHASE 1 & 6	←G→G	←G→G	G	R	R	R	R	R	DW	DW	↑
1 & 6 CHANGE	←Y→Y	←Y→Y	Y	R	R	R	R	R	DW	DW	↑
PHASE 2 & 5	R	R	R	←G→G	←G→G	G	R	R	DW	DW	↑
2 & 5 CHANGE	R	R	R	←Y→Y	←Y→Y	Y	R	R	DW	DW	↑
PHASE 2 & 6	G	G	G	G	G	G	R	R	DW	DW	↑
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	DW	DW	↑
PHASE 4	R	R	R	R	R	R	G	G	DW	DW	↑
4 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	↑
PHASE 4 ALT	R	R	R	R	R	R	G	G	WK	WK	↑
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	G	G	FL/DW	FL/DW	↑
4 ALT CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	↑
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	↑

WIRING DIAGRAM



TOD NO: XX427-105
SHA NO: MO205A5C/B5C
MD 198 @ MCKNEW RD



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 198 (SANDY SPRING RD)
AND MCKNEW ROAD
BURTONSVILLE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 8/28/09 CONTRACT NO. XX4275185

DESIGNED BY JAMES ALLEN JR. COUNTY MONTGOMERY
DRAWN BY JAMES ALLEN JR. LOGMILE 15019804.37
CHECKED BY F.A.P. TIMS NO. J587
F.A.P. NO. TOD NO.

TS NO. 2696C DRAWING NO. 2 OF 2 SHEET NO. OF



STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy., NW
Glen Burnie, MD 21061
PH (410) 590-5500
Fax (410) 590-6637

PLOTTED: 8/28/09
FILE: 8/28/09

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